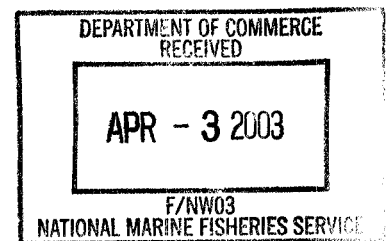




Connecting whales and people in the Pacific Northwest



March 31, 2003

Chief, Protected Resources Division
National Marine Fisheries Service
525 NE Oregon Street, Suite 500
Portland, OR 97232

FAX: (503) 230-5435

Re: Comments in Response to Proposed Rule Listing the Eastern North Pacific Southern Resident Stock of Killer Whales (*Orcinus orca*) as 'Depleted' Under the Marine Mammal Protection Act (MMPA)

Dear Chief,

We offer these conservation measures in support of efforts to restore health and reproductive success to the Southern Resident Orca Community (SRC). We endorse the comments contained in the March 31, 2003 letter to NMFS from People for Puget Sound, and have signed on to that letter. We too believe that NMFS' determination that the SRC does not qualify as a "species" as defined in the ESA is inaccurate. Our comments in that regard may be found in Appendix A, attached. Following are conservation measures we believe are essential to provide any prospect of reversing the decline of the SRC:

- The basis of our understanding of the population dynamics of the SRC derives primarily from longitudinal demographic field studies. Since 1976 the Center for Whale Research (CWR) on San Juan Island has conducted the only such study of the SRC. In order to continue to have our eyes and ears on the demographics of the SRC it is imperative that support, cooperation and funding be secured into future years for the photo identification research conducted by the CWR. In particular, research on winter travel patterns for the SRC should be given high priority, to better understand year-round habitat needs and prey requirements.
- It has been demonstrated that the SRC diet is comprised of fish and squid, but within those parameters, SRC prey choices are poorly understood. More comprehensive research and analysis of the species eaten by the SRC are needed to better pinpoint the specific habitats and species that need protection and/or restoration in order to provide sufficient sustenance for the SRC. We understand that opportunities to examine prey species generally arise only when a whale carcass has washed up on land, but other approaches, such as fish scale retrieval or analysis of lipid composition from biopsy sampling could help provide prey information. Biopsy sampling is invasive, however, so if darting is done it should be well regulated and minimized.
- We believe NMFS should assist with boat etiquette education for private/recreational boaters and should continue to partner with whale watch operators in fine-tuning and following whale watch

guidelines. We strongly suggest, however, that NMFS should not consider that expending resources on case by case incidents of possible harassment of whales contributes to an orca recovery plan.

- The basis of any recovery efforts should emphasize restoration of salmon stocks, which in turn requires an ecosystem approach. We believe that Southern Residents are declining in large part due to inconsistent quantity and quality of prey species. Habitat quality assessments must include data on all habitats utilized by salmon throughout their life cycle, as well as salmon prey species. For example, we suggest protecting Cherry Point herring beds from oil contamination and removing the Elwha Dam to increase salmon spawning habitat. In essence, the components of on-going efforts to restore salmon stocks provide the best hope for restoring viable habitat for orcas. A comprehensive, well-funded habitat protection and restoration plan, coordinated by government and ngo leaders, involving key stakeholders and the scientific community is the best tool for orca recovery.
- The only two SRC whales whose carcasses washed up on land (L54 and J18) showed extremely compromised reproductive systems and advanced immunodeficiency, known symptoms of persistent toxic contamination. Studies have shown that at least some members of the SRC have ingested extremely large quantities of bioaccumulative pollutants such as PCBs. Other potential toxins include polycyclic aromatic hydrocarbons (PAHs) and heavy metals such as mercury. Further studies are needed to determine the vectors of contamination and their impacts on the whales' health. In the near term, however, NMFS is encouraged to support cleanup of toxic pollutants and prevention of further contamination.
- We advocate greater support for efforts toward public involvement and education – on land and on the water through whale watch operators and naturalists as well as the Soundwatch program – about the Southern Residents, their natural history and culture, the environmental hazards they encounter, and the ways the public and government agencies at all levels can help solve these problems. For example, recovery plans should include programs such as education for citizens on how to be “Whale Friendly Neighbors” i.e., don't use harmful chemicals; etc. In addition, public awareness of the whales' use of the marine habitats derives from increased community involvement in orca sightings, thus support for sighting networks should be among the restoration efforts fostered by NMFS.
- We urge increased efforts to return living but separated members of the SRC, i.e., L98, currently holding his position in Nootka Sound, BC, and Lolita, a potentially reproductive female member of L pod (by acoustic match), on display since 1970 in a marine park in Miami, FL.

Conclusion

We believe that the Proposed Rule to designate the Eastern North Pacific Southern Resident stock of killer whales (*Orcinus orca*) as depleted under the Marine Mammal Protection Act (MMPA) is warranted. Once designated as depleted, a conservation plan should be immediately developed by NMFS to restore the health of this population.

We also urge NMFS immediately to issue a Proposed Rule to designate the Southern Resident stock as either threatened or endangered under ESA. While a depleted listing under MMPA may provide the basis for development of a conservation plan, it will not sufficiently provide for the recovery of this trans-boundary community of killer whales.

Sincerely,



Howard Garrett, Board President
Orca Network



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Appendix A

March 31, 2003

Chief, Protected Resources Division
National Marine Fisheries Service
525 NE Oregon Street, Suite 500
Portland, OR 97232

Re: Comments in Response to Reconsideration of Listing the Eastern North Pacific Southern Resident Stock of Killer Whales (*Orcinus orca*) as “Endangered” Under the Environmental Protection Act (ESA) in 2006.

Dear Chief,

We are disappointed that NMFS did not list the Southern Residents under the Endangered Species Act, which would have mandated a process for implementing protections and a recovery plan. We understand that the scientific community has only recently assembled the information needed to satisfy the legal requirements of the ESA for these whales. We hope to clarify below that the Southern Resident orcas are a distinct and significant population, equivalent under the law to a species, based on our current understanding of the sociological and cultural qualities demonstrated by this orca community.

We offer these comments in the interest of the protection and recovery of the Southern Resident population of orca whales.

It is clear that the Southern Residents have maintained genetic separation from all other orca communities worldwide for at least one hundred thousand years, despite the fact that it is biologically possible to interbreed Southern Residents with members of different communities when removed from their communities. In addition, it is understood that the Southern Residents maintain a specialized dietary preference for fish, rather than avail themselves of marine mammals, although other orca populations do eat marine mammals, but avoid fish, demonstrating that these dietary preferences are upheld according to cultural standards, rather than genetic predisposition.

According to Rendell and Whitehead (2001), who reviewed the evidence for cultural transmission in whales and dolphins from the perspectives of captive experimental studies, field studies based on evolutionary ecology and research on cultures in other animals, cultural transmission is deduced from spatial, temporal and social patterns of variation in behavior that are not consistent with genetic or

environmental determination or individual learning. The authors state clearly that “The complex and stable vocal and behavioural cultures of sympatric groups of killer whales (*Orcinus orca*) appear to have no parallel outside humans and represent an independent evolution of cultural faculties.”

What does it mean to say that orcas exhibit cultural faculties? Is this another loosely defined compliment, much like the recurring refrain that orcas are “highly intelligent?” Intelligence is much like beauty, a property primarily of the beholder, but the term *culture* applies only to animals that demonstrate specifically defined processes and capabilities, and describes a clear distinction from non-cultural animals.

Animals that possess culture must first be aware of themselves as separate entities. This ability can often be tested by the “mirror self-recognition test,” in which a spot of color is placed on the face or head of the animal and a mirror is provided to determine if the animal realizes that the image in the mirror is itself. Many animals, when presented with a mirror will either ignore it or respond aggressively as if it was another animal. Animals that seem to be self aware, such as monkeys, lesser apes, elephants and African gray parrots, have been shown to use the mirror to perform tasks like finding hidden objects but not to examine themselves. Until 2001 only some mature great apes and humans passed the test, calling it an example of “cognitive convergence.” Reiss and Marino (2001) showed that bottlenose dolphins are fully capable of self-recognition. Orcas are the largest, and largest-brained, delphinid, so it is reasonable to assume that they are unambiguously self-aware.

Self-awareness, or selfhood, means that the individual is able to see self in situation. We assess how others affect us, and how we affect them (Blumer, 1969). Self-awareness in the cultural context implies the ability to share symbolic means of communication, in other words, to share meanings. As we can talk to others, we can talk to our self. Because of the self, humans are able to think, to point things out to themselves, to interpret a situation, to communicate with themselves in the ways they are able to communicate with other humans. Without self-communication, the human would not be able to communicate symbolically with others, for it is only because we can simultaneously give off meaning to others and understand how it is interpreted that effective symbolic communication can take place. The unique acoustic repertoires used by each orca community meet the definition of symbolic communication.

All this sociological jargon points to the conclusion that Southern Resident orcas are aware of themselves not only as individuals but also as a distinct community. Furthermore, just as they are aware of others within their community, they are also aware of other orca communities.

The Southern Resident orca community is culturally significant, just as any human ethnic community, from Inuit to American, is culturally significant. Orcas communicate using distinct vocal traditions analogous to language. They share deep knowledge of this marine ecosystem, the pulses of life from rivers and tides, the processions of salmon runs. They maintain complex relationships among pods and subpods. They have established a way of life here. Other orcas could try to learn the ways of these orcas, but they would not have the collective memories of the Southern Residents. The orcas we have come to know that make up J, K and L pods cannot simply be replaced. Self-awareness leads to cultural identity, and generations of cultural cohesion result in genetic uniqueness. NMFS has said: “Southern Residents can be genetically differentiated from other resident killer whales, but it is unclear whether the magnitude of these differences should be considered “marked.” We believe the differences are extremely “marked.”